

NAVY MEDICINE

March-April 1990



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Editor
Jan Kenneth Herman

Assistant Editor
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COVER: Presidential advisor and speechwriter, Samuel Rosenman (left) and LCDR Howard G. Bruenn, MC, USNR, take a break at Pearl Harbor, HI, in July 1944. In March of that year, Dr. Bruenn became President Franklin Roosevelt's cardiologist. Story on page 6. Photo courtesy Franklin D. Roosevelt Library.

Navy Medicine 1907

BUMED Archives



Naval Hospital, Puerto Rico baseball team poses outside their Hospital Corps quarters.



HM3 Jose Sales, NSHS

Susan L. Harechmak, RN, cares for a newborn on the new high frequency jet ventilator in the NNMC Intensive Care Nursery. The jet ventilator, received in October 1989, makes saving more lives of critically ill infants possible.

New High Tech Ventilator

A newborn infant, not much bigger than the size of a grown man's hand, lies hooked up to tubes which lead to large monitors and machinery. A man and woman hold each other's hand as they sit hour upon hour watching the baby and the machinery and waiting.

Doctors, nurses, and technicians walk in and out of the specialized, high tech nursery and their voices fuse with the steady beat of respirators. It is not a nursery full of stuffed animals, and there are only a few multicolored mobiles hanging from the ceiling. You rarely hear musical toys or smell baby powder. This is the Intensive Care Nursery where each second counts and a team of specialists works around the clock monitoring, watching, testing, and working to save the most fragile lives of all.

Recent breakthroughs, which have resulted in the creation of specialized equipment, have made this vital task somewhat easier. Head of the NNMC Newborn Division of the Pediatric Department, CDR John H. Nading, MC, said high frequency jet ventilators make saving more lives of critically ill infants born prematurely possible.

LCDR Igor Gladstone, MC, said NNMC is the only military hospital in the world to use the jet ventilator. Georgetown University Hospital is the only other medical facility in the area which also has the equipment. Although the jet ventilator has been available under research protocol for several years, it was approved by the FDA during the summer of 1988. The Intensive Care Nursery acquired the ventilator in October 1989 and used it for the first time to save a newborn on 25 November.

Tubes connect the infants to the high frequency jet ventilator and conventional ventilator. Oxygen and car-

bon dioxide are transported to and from the baby at a fast rate. Nading said the process has been described as facilitated diffusion. Little pulsations of air, like breaths, facilitate the diffusion of gases through the airways so oxygen gets down into the airway and carbon dioxide gets out.

Much faster than conventional methods, the ventilator delivers approximately 420 breaths per minute. The normal breathing range for the average person is between 20 and 30 breaths per minute. For a newborn, it normally falls between 40 and 60 breaths per minute.

Premature babies often have problems with an air leak—air rupturing out of the lung air space and into the lung, the lung tissue, or into the chest cavity, Nading explained, adding that when infants are that critically ill it is difficult to support them with a conventional ventilator alone. Experts also have found that transporting a baby in this condition also limits chances for survival.

"One of the main reasons we felt like we needed one here is that even though we only sent out a couple of babies a year, transporting babies who are that sick cuts down on the babies' chances of survival. If we have one in the hospital we can begin treating them right away," Nading said.

The doctors said they try to treat the infants as early as possible so at times they only have to be placed on the ventilator for about a week. The first infant treated on the machine was born at NNMC, another was born at Patuxent River, and two others were transferred from Walter Reed Army Medical Center.

Reaching the point of actually being able to treat these babies on the ventilator has required some special effort and extra work from several NNMC staff members. For example, Nading

and Gladstone said the Respiratory Therapy Department put a lot of time into getting the use of the ventilator off the ground. Now respiratory technicians and nurses spend almost all their time and energy keeping the unit running smoothly.

Is the baby's breathing tube okay? Are both the jet and conventional ventilators operating correctly? Are carbon dioxide levels monitored on a continual basis? Does it look promising that the infant will pull through alright? These are all questions which run through the minds of the nurses and technicians. A registered nurse remains with the baby at all times, a respiratory technician is in the unit 24 hours a day, and a jet ventilator-trained doctor is always on call.

Susan L. Harechmak, RN, who cares for infants on the machine said it's important to remember these babies are critically ill in addition to being on a life-support system, so everything that would be done for a critically ill baby is being done at the same time. "We keep track of the two ventilators. Keeping track of all other things in addition to the ventilator is a full-time job," she said.

However, before the process involved intensive monitoring, it involved extensive training. Those who would be working with the ventilator spent hours studying manuals, viewing videotapes, and participating in actual clinical training.

This extra time and hard work doesn't seem to bother the technicians, nurses, and doctors of the Intensive Care Nursery as they continue to save these little lives with the help of each other and the special equipment which makes it possible. □

—Story by Kerry A. Gildea, Public Affairs Office, NNMC, Bethesda, MD.

Below: Survivors of the merchant vessel *Huazhu* talk with interpreters, HM3 Siuking Tizon and LCDR Simon Chan, in Subic Bay. **Right:** The surviving crewmen wave to sailors aboard *Lake Champlain*. They were headed for examinations at U.S. Naval Hospital Subic Bay, while *Lake Champlain* headed back out to sea.



Right: An injured crewman gives a salute as he is lowered from *Lake Champlain* to the pier in Subic Bay. **Far right:** HM3 Yvette Wofford assists another injured crewman to a waiting ambulance.





Seventh Fleet Rescues Chinese Sailors



A seafarer's nightmare became reality for 20 Chinese seamen recently when their ship capsized and left them bobbing in 10- to 12-foot waves in the South China sea.

According to survivors, six members of the 20-man crew were killed when a cargo of timber rolled from the ship's listing decks, causing the ship to sink. The remaining 14 crewmembers spent 2 hours struggling for their lives, not knowing if their distress signal had been heard.

USS *Lake Champlain* (CG-57), USS *Stein* (FF-1065), USS *Lockwood* (FF-1064), and USNS *Navasota* (TAO-106) answered the call from the merchant vessel *Huazhu*. The four Seventh Fleet ships and embarked helicopters located and pulled the survivors and five dead from the sea.

One of the dead, the *Huazhu's* captain, was not recovered. Rescuers were unable to reach his lifeless body as it floated trapped among the debris.

The cruiser *Lake Champlain* transported the recovered crewmen to the U.S. Naval Facility Subic Bay, Republic of the Philippines, where they were met by doctors, corpsmen, and inter-

preters from the U.S. Naval Hospital Subic Bay.

Following checkups from the hospital's medical personnel, the seafarers were turned over to representatives of the People's Republic of China Embassy in Manila. Two seriously injured seamen were transferred to a civilian hospital in Manila.

The rescued crew's feelings of gratitude may have been expressed best by one of the Chinese seafarers just moments before *Lake Champlain* got underway from the pier in Subic Bay. The grateful sailor made a respectful approach to the ship's commanding officer, threw out his arms and squeezed them tightly around the taller, khaki-clad figure.

"We thank you so much," the seaman said as he pressed his head to CAPT R.K. Martin's chest. "It is because of you and your crew that we are here today. We owe our lives to you."

The Chinese sailor released his grip, stepped back and slowly bowed. Tears fell from his face to the solid ground beneath his feet. □

—Story and photos by PHI Ted Salois, Seventh Fleet Public Affairs, Subic Bay, R.P.

The President's Cardiologist

Forty-six years ago, World War II was approaching a dramatic climax. In March 1944, the Allies had already seized the offensive both in the Pacific and in Europe. The opening days of the month saw U.S. troops hitting the beaches of the Admiralty Islands as they drew ever closer to Japan. On 3 March, American B-17s commenced daytime bombing of Berlin, picking up where the Royal Air Force had left off in pummeling the German capital by night.

On the Eastern Front, American supplied Soviet troops had not merely blunted the Nazi invasion of the motherland; they were now annihilating entire German armies.

In Washington, DC, President Franklin D. Roosevelt neared the end of an unprecedented third term in

office. As pundits speculated on whether he might make a bid for a fourth term, it became increasingly evident that the stresses of nearly 12 years in that office had taken their toll. The President's repeated bouts with "flu" and "bronchitis" were newsworthy, yet White House physician and Surgeon General of the Navy, VADM Ross T. McIntire, MC, reassured the public that their President was basically in sound health for a man his age. Those close to Roosevelt—family and White House intimates—knew better.

On 27 March, McIntire was concerned enough to send the President to the National Naval Medical Center (NNMC) in Bethesda, MD, for a thorough examination. There, LCDR Howard G. Bruenn, MC, USNR, car-

diology consultant to NNMC and the Third Naval District, found the Chief Executive suffering from hypertension, hypertensive cardiac disease, and acute bronchitis.

The following day, Bruenn, under McIntire's orders not to discuss Roosevelt's health with anyone, reported the shocking facts to the admiral. From that day until the President's death some 13 months later, it was LCDR Bruenn, not VADM McIntire who literally had his finger on the pulse.

Bruenn traveled everywhere with the President—to Hawaii for a meeting with the Pacific commanders, MacArthur and Nimitz; to Quebec for a strategy session with Churchill; through yet another grueling Presidential campaign; to Yalta for a fateful conference with Churchill and Stalin; and finally to Warm Springs, GA.

In 1970, following a 25-year, self-imposed silence, Howard Bruenn wrote his clinical recollections of Roosevelt's last year based on personnel notes.⁽¹⁾ (FDR's medical history had disappeared mysteriously.) Bruenn was convinced, as was the Roosevelt family, that the time had come to end years of speculation and rumor and set the record straight.

Navy Medicine recently interviewed Dr. Bruenn, now retired from a long, distinguished career at the Columbia Presbyterian Medical Center, at his home in Riverdale, NY. The 85-year-old cardiologist still has vivid memories of the most unforgettable year of his life.



Dr. Bruenn



Pearl Harbor, 26 July 1944: FDR with GEN Douglas MacArthur (left) and ADM Chester Nimitz (right) on the deck of USS *Baltimore*. VADM McIntire stands at extreme left; LCDR Bruenn stands second from right.

Franklin D. Roosevelt Library

Navy Medicine: When did you join the Navy?

Dr. Bruenn: After Pearl Harbor I went to the enlisting office on Church Street [NYC], where I was interviewed. They told me to come back after my next birthday and they would make me a lieutenant commander instead of a lieutenant. I reported to Sampson [Naval Hospital, Sampson supported the nearby Naval Training Center on Lake Seneca, NY]. Very soon thereafter I was ordered to the National Naval Medical Center in Bethesda, MD. There I was made cardiologist for the

hospital and consultant to the Third Naval District.

This was something I had been trained for. I had my own office at Bethesda and saw people only by appointment referred from various areas in the Naval District. Officers who were eligible for promotion were seen in the Naval Dispensary in Washington. If there was a cardiac or vascular problem they would be sent to me.

Why had they assigned you to Bethesda?

I was still in my 30s when I was transferred there. I had been at Columbia Presbyterian Hospital in New York where I was a resident physician and a member of the faculty. When I came back after the war I tried to find out how the Navy had obtained information about me. How I got transferred from a ward officer in a boot camp to the head of the cardiology department at Bethesda is still a mystery.

Who did you work for at Bethesda?
I was on my own. I had my own

staff—technicians, secretaries, and so forth. It was a very enviable job.

While you were there, did you have any dealings with VADM McIntire [Ross T., Surgeon General of the Navy]?

No.

What was McIntire like to work for?

I found Dr. McIntire very pleasant and friendly. When he first called me about the President, he said, "I'd like to have you take a look at him."

The President's secretary, Grace Tully, mentioned that some months before, she had found that he had fallen asleep at his desk or he had momentarily lost consciousness while signing a document. She said that they were all concerned. In fact, it was Anna [Anna Roosevelt Boettiger, FDR's daughter] who got Dr. McIntire to call you and have you check him out.

The initial thing that brought me into the picture was Anna. She put the pressure on Ross McIntire to find out what was going on because the President was not himself.

And you were pretty shocked by the President's condition?

Yes, I was. He was thought to have had an upper respiratory infection and had not quite regained his strength. When I went over him and I found that he was in acute congestive heart failure, that put a different aspect on the whole situation. Dr. McIntire asked me to write out what I thought should be done, which I did. When I gave him my recommendations for bed rest, diet, etc., he said, "You can't do that. This is the President of the United States!"

He summoned the honorary Navy medical consultants. Among them were [Dr. James E.] Paullin, who was the President of the AMA at the time and Dr. [Frank H.] Lahey from Boston. We sat around a table and I showed the assembled doctors the X-rays, the electrocardiograms, and

the blood pressure readings, and the results of the physical exam. They asked me what I thought we should do. I said that we had to digitalize (2) him and follow the above procedures. They thought that was all too drastic and extensive.

They went to see the President the next morning and examined him. When they came back they agreed that I could go ahead with the digitalization.

I digitalized the President and in about a week or 10 days the results were spectacular. His lungs, which initially had been congested and with a small amount of fluid, were now clear. His heart, which was enlarged, had diminished in size. His coughing had stopped and he was sleeping soundly at night. Dr. McIntire said, "If you have rapport with the President, this is now your problem." And that's how the whole thing started.

How did you feel about accepting that tremendous responsibility?

Obviously enough, I was very much impressed and a little apprehensive. But the President was such a nice person that we had no problem. He became another patient. I would go down and see him four or five times a week at the White House and, of course, I went with him on his trips.

Yes, thank goodness the President did very well, although the pressures were tremendous. You see, the President **was** the government. He was his own Secretary of the Treasury, his own Secretary of State. He was running the works, including the war. On the other hand, he would sleep like a baby on a train, on a ship, on a plane. He had the ability to push problems in the background and really get an adequate night's rest. And that was very helpful.

Was there any medication for hypertension?

No. We tried to cut down on his weight, and to reduce stress, be sure he got a good night's sleep, cut down on salt—the usual things. But there was nothing directly to control it.

His breakfast habits would today make us throw up our hands in horror. He loved his eggs with fried ham or bacon every day. I'm sure that didn't help.

That's right. The main thing we eliminated was quantity and calories.

Did he have any other problems? Dr. McIntire mentioned the upper respiratory problems in his book [White House Physician, G.P. Putnam's Sons, NY, 1946].

Dr. McIntire was a nose and throat doctor and he concerned himself with the President's voice. He wanted to be sure he had a good speaking voice. [He did that] using sprays.

The President did have some significant medical problems in the past. He had developed a profound anemia about 1938 or 1939. And the polio was an extraordinary thing. He was essentially paralyzed from the hips down and could only support himself with braces. But there was an understanding even before I came. No picture was ever taken of him standing. He was always behind a desk. But it left him with very poor development of the leg muscles. They had just wasted away. But he did have tremendous shoulders and chest. In fact, he weighed something like 185 to 190 pounds with nothing here [gesturing toward his legs]. One of the things we tried to do was to take weight off. It was easier on his heart, easier on the blood pressure, etc. Unfortunately, some of it came off his face and he began to look haggard. That was the reason, you see. And then we had a job trying to get him to eat again. He was so pleased with his weight loss, we were forced to tempt him to eat.

Jim Bishop, in his book, *FDR's Last Year* [William Morrow and Co. Inc., NY, 1974], over and over says the President didn't ask about his health, and therefore Dr. McIntire didn't tell him. Didn't Roosevelt know how ill he really was?

He never asked me a question about the medications I was giving him, what

his blood pressure was, nothing. He was not interested. He had a job to do and the hell with everything else. I remember when the pressure was put on him to run for the fourth term. All those people around him depended on the President exclusively for their jobs, for their reputations, everything. I'm not only talking about the secretaries but such people as Steve Early, the press secretary, everybody. The President was the center pole, no question about it. [Robert E.] Hannegan, who was then Chairman of the Democratic National Committee, wanted the President to run. They all wanted him to run. And he wasn't particularly anxious to run.

Even knowing he was a man of destiny?

He felt he had done his job. Not quite, that's true. He felt he had to complete the job but he knew he wasn't a 21-year-old either, although he never asked any questions. He was always interested in seeing me come and talking to me. It took a certain amount of persuasion to convince him to run. It wasn't a "I want to be President for another 4 years" sort of thing.

Then he wasn't keen on running but he must have asked himself this question? "Who are we going to put up if I don't run?" Who was there in the wings who he would have trusted to carry on his programs in the Democratic Party? What kind of shining light was there?

There was nobody.

Getting back to the condition you found him in in March 1944 . . .

He was in heart failure.

What do you attribute that to? Was it a lack of exercise because of the polio, or 12 years of unremitting stress? Diet?

It was the high blood pressure. From what I remember from his chart, it was first detected at least several years before I saw him. And then the cardiograms showed that he had underlying coronary disease. He never complained of any chest pain except, if

you remember, on one occasion when he gave a speech at Bremerton, WA, on the fantail of a destroyer.⁽³⁾ He kept on with the speech and came below and said, "I had a severe pain!" We stripped him down in the cabin of the ship, took a cardiogram, some blood and so forth, and fortunately it was a transient episode, a so-called angina, not a myocardial infarction. But that was really a very disturbing situation. That was the first time under my observation that he had something like this. He had denied any pain before. But this was proof positive that he had coronary disease, no question about it.

During the time you took care of the President, did you have an office at the White House?

No. They gave me a car and I would drive down in the morning and see him then go back to work at the hospital.

You had your own patients to take care of?

Oh yes, I had office hours. [Taking care of the President] was so-called "temporary additional duty."

One of the first trips the President took for rest and recuperation after you came on was the one he took to Hobcaw, Bernard Baruch's place in South Carolina. What are your recollections of that?

[All the trips followed] the same type of pattern. We would all be told to appear in the basement of the Bureau of Printing and Engraving where a special train came in. We were assigned our cars, berths, and so forth. We would leave in the middle of the night about half past 12 or 1 o'clock. Once we got where we were going, we were assigned bedrooms, etc. I would see the President every morning, examine him, and then I might go down to the pool if we were at Warm Springs. But I was always on call. The Secret Service knew where I was all the time. Life went on very casually. Guests would sometimes drop in for dinner. The President was really a



master of the situation at the table. There was no question about it. He smoked his Camel cigarettes, had his martini before dinner. He would go for boat rides, sleep late in the morning, perhaps take a nap in the afternoon. It was ideal for this type of thing. Every day a bag would come in from the White House with the mail and all the papers would be signed. That took about half an hour or so and that was all the business that was done.

Wasn't it on the trip to Hawaii to confer with MacArthur and Nimitz when he was nominated for his fourth term?

Yes. He was nominated while the train was in the yards in Chicago. He accepted the nomination in a railroad car. Anna and the photographers were taking pictures. He was up at one end of the car and we were sitting in the back. As one of the naval photographers took a picture of the President they also caught me. I was leaning over. That's the first picture in which I appeared. The only reason I bring it up is that it was this picture that was published in *Life* magazine. The doctors at my hospital—Presbyterian—recognized me and were aware of what



Franklin D. Roosevelt Library

Quebec, 16 Sept 1944: Winston Churchill (left), the President, and Canadian Prime Minister, Mackenzie King (right) meet the press following another wartime strategy session.

was going on. This was the first they knew of my role. I had been warned to keep my mouth shut because wherever I might be, the President might be there too and they didn't want any unnecessary knowledge being spread around.

The campaign followed this. Had the Republicans gotten hold of information concerning the President's precarious health, it would have been a whole different situation.

That brought up the problem: Should he or should he not have run

for the fourth term? And I must say, in all honesty, if I had been asked what my opinion or judgment was, I would have been greatly swayed by the circumstances. Here we were in the middle of a great war which had been conducted fortunately or unfortunately on an almost personal basis between Stalin, Churchill, and Roosevelt. I can say unquestionably that when Truman came in after the President's death, he had seen the President twice and knew nothing about what was going on. The President had a personal relationship with these others

[Churchill and Stalin] and I thought that was damn important.

McIntire was the spokesman on the President's health and everyone was saying that the President didn't look well, what was wrong with him, and he would say, "It's nothing, it's simply an upper respiratory thing, he's had the flu or a case of bronchitis," or whatever. He really couldn't say anything else. All this I can understand—politics. What I have difficulty with is reading McIntire's book, which he wrote in 1946. In it he maintained, to

the bitter end, that the President was essentially a healthy man for his age. His blood pressure was normal. His heart signs were normal and everything else was normal. While the President was alive, for political reasons, McIntire had to maintain a positive image. But once FDR was dead and a whole year had gone by, McIntire felt compelled to write his memoir and in it he goes through the whole litany all over again. Can you think of why he did that?

I didn't publish my paper until 1970 and that sort of blew the door down as far as the actual facts were concerned.

So, it wasn't really until 1970 that any of this came out.

That's right. There was always the question of violating the relationship between the patient and a doctor. Anna [Roosevelt] really went after me to write this thing but got permission from her three brothers—they all thought it was a pretty good idea—just to clarify the situation. There were so many rumors, even years after his death. For example, the Russians wanted to have an autopsy; they thought he had been poisoned or something of the sort. So I did write it on the basis that the family wanted me to. The editors of the journal agreed. I must have gotten over 150 requests for reprints of that article.

My contact with McIntire stopped when I left the Navy. We communicated letters, but nothing about this.

The thing that has bothered historians, and you mention it in your paper, is the fact that FDR's medical records have disappeared.

It's one of the strangest things. When I'd come back [from seeing the President at the White House], I would go to Dr. Harper's (4) office or Duncan's (5) office and they would give me the chart and I would write a note for that day concerning what I'd found, return it to the administrative office, and then it would go back in the safe. After I wrote the final note, I never saw it again, never saw it. You might find it in your files, I'm not sure.

It's gone.

Isn't that curious?

I suspect, well it's all circumstantial, but the person who had the most to lose from those records being made public was Dr. McIntire.

That's right.

He really took a risk during the President's life choosing to keep the whole thing bottled up. In 1946, he really went out on a limb, thinking, of course, that this material would never be divulged, by saying that the President was perfectly healthy. The fact that he looked tired was not abnormal for a man with his responsibility. "Besides, he didn't follow my advice. I told him to rest and he couldn't. He was the President." But there was nothing organically wrong with him. McIntire said it time and time again. I can't imagine him ever wanting those records to see the light of day.

Sure. I don't see how anyone other than somebody in some official position could have gotten their hands on them. Well, it's one of those mysteries.

What preparations did you make for Yalta?

Very little because I was just a passenger. I was told to appear at the train site. We went down to Norfolk, boarded the ship [USS *Quincy*]; it was a very pleasant journey. We got to Malta and then we had a succession of people coming in to see the President, including all the commanding officers of the British Admiralty who were in the Mediterranean. It was quite a party. We took off at night from Malta to fly to Russia—the Crimea.

The President's bed was perpendicular to the plane's axis. It was a big, wide bed. But he refused to have a safety belt. We were afraid that if there was a sudden stop or something, he would be tossed right out of the bed. [Michael F.] Reilly, [Chief of the White House Secret Service detail] and the rest of us talked it over before we took off and decided that when all the lights were out, I would creep in and position myself on one side of the

bed so that if he fell out of bed he'd fall on me. We took off without any problems. The next morning, the President said, "It's lucky I recognized you as you came in."

I understand that was quite a hair-raising flight.

Well, it was in this sense. We had a lot of people going to Yalta—from the State Department, from the Chiefs of Staff. We must have had a hundred or more. The President's plane took only 12 people. We had to go over Greece, which was then occupied by the Nazis. Everyone was anxious to get on that plane because it was the only one with fighter escort.

Who was on the plane?

Anna Roosevelt, ADM [William D.] Leahy, RADM Wilson Brown, the President's naval aide, and MGEN Edwin M. Watson. Byrnes [James F.] was there, Stettinius, [Secretary of State], and the chiefs of staff.

What kind of welcome did you get when you landed in the Crimea?

It was not a very nice day—cold and rainy. But they had a guard of honor. [V.M.] Molotov, [Soviet Foreign Minister] was there, Stalin wasn't but a couple of other fairly high dignitaries were. They had a few refreshments for us.

It was quite a ride to Yalta—about a 5- or 6-hour ride by car. The roads weren't magnificent.

What did you see along the road?

The Germans had been there and it was pretty desolate. It was in February too and it was a wintry landscape with devastated houses and so forth.

Did you see any troops lining the roads?

Not when we went through. Churchill had written a note to the effect that if you had looked far and wide, you couldn't have chosen a worse climatic place than Yalta. They found that their palace had a lot of vermin, etc. Our Navy sent in a party to clean the place up and make it habitable.

When you got to Yalta, the Navy people had already cleaned it up so Livadia Palace was in good shape.

The Germans had taken all the metal—all the brass knobs had been taken off; it was pretty bare but it was clean. Once we were there they took good care of us. They would bring the food down to us, from God knows where. There certainly wasn't much around that place.

What were your impressions of Stalin?

When Stalin came visiting, that was a performance. He came to Livadia, which was our palace, for the conferences. Stalin and his party were [staying] a couple of miles away. The route was lined with Soviet troops. When he got to our place, he got out of the car. There were four husky Russians surrounding him and they marched in. There were machine guns all around. He wasn't taking any chances. But he was quite a fellow. I saw him several times. He was relatively short and broad and a bit brusque. But he was an impressive person.

Yalta must have been extremely stressful for the President.

What they were doing was whipsawing him. [British Foreign Secretary Anthony] Eden would see him in the morning, Churchill in the afternoon. And this kept on going, and then there was the conference at night. There was no rest for the poor man.

Of course, Churchill had his own agenda too. We are always given the impression that Churchill and Roosevelt had this very special relationship that they had maintained throughout the war and that they saw eye to eye. But this is not what was actually going on at Yalta; that's not the way it was at all, was it?

No. They had a deep appreciation for each other and when the President was going to run for the fourth term, Churchill volunteered to come over and politic for him. The President said, "Winnie, if you love me, stay home."



Yalta simplified was that Roosevelt wanted the United Nations and didn't want the old order to be reinstated after the war.

The President acted almost as a mediator between Churchill and Stalin. Those two just couldn't get along. He maintained good relationships with both men until we got back home and the Russians began monkeying around with Poland. Then the President got very upset. He wrote a letter to Stalin protesting that this was not what had been agreed upon. But then he never saw him again.

Was Roosevelt in any kind of physical or emotional condition at that point in February 1945 to be dealing with the likes of Joe Stalin? Was he at his best?

The President was a very stubborn man in his own way. He saw the possibilities and they were not satisfactory—fighting over Berlin or over Poland. You just can't do that. He tried the best he could to get the Polish government in exile in London back into Poland, but no go.

Some historians have said that FDR was too trusting as far as Stalin was concerned.

As I understand it—I wasn't at this particular conference—but it was agreed that Poland was going to be a democratic nation with the government in exile included. The Russians just turned it around and put their own people in and then what could you do?

What was the President's health just prior to going to Yalta, because when he got back he certainly looked terrible.

There was no great change. There were a few times when I really got worried about him. He had an attack of gallbladder colic down at Baruch's place. And I'm no surgeon but with a few simple things, the thing subsided and that was that. When we got back we took an X-ray and he did have stones in his gallbladder.

But there were one or two situations. He had seen a movie about Woodrow Wilson and the League of Nations in which Wilson really got pummeled. The President said, "By God, that's not going to happen to me!" And his blood pressure was [gesturing] about that high that night. Then it came down the next morning.

Another time out at Yalta, they were having a set-to, particularly about Poland. That night, after the meeting,

he had something we call *pulsus alternans* which means that every alternate beat was less strong than the previous one. That's a very bad sign. But that too subsided after 12 hours.

What's that a precursor of?

It's a combination of heart and blood pressure. We certainly put the clamps on him by cutting down his activities for the next 24 hours and that too subsided. And on the way back he was fine. But he was so disturbed about Pa Watson's (6) death.

Did he show any visible signs of upset?

No. He showed what you would if a good friend of yours passed on. He felt very sorry and reminisced a bit about their past and so forth.

I must say it was all a very extraordinary experience for me. Here I was, naive and interested in medicine and that's it. And I was suddenly thrust quite literally into the center of things.

What was the President's mood when he went on that last trip to Warm Springs in April 1945?

Actually, he was having a very pleasant time down there. He loved that place and spent a good deal of time there. He had his two cousins with him, Daisy [Margaret] Suckley and Laura Delano. He was really having a ball. He took the car out driving around the countryside and so forth. Of course, they bent over backwards for him down there because he had been an old patient.

Of course, the thing that happened was so dramatic, so unexpected. As a matter of fact, I had seen him that morning and he was alright, nothing unusual. He enjoyed his breakfast and I went down to the pool, not that I liked swimming particularly but it was a pleasant place to go. And then the Secret Service came down and said

that something had happened to the President. They took me right up to the cottage and he was unconscious. The President's valet [Arthur Prettyman] and I carried him into the bedroom, put him in bed and I did what I could, which wasn't much, and got in touch with Washington, with Ross McIntire. He notified Mrs. Roosevelt and Dr. Paullin, who originated in Atlanta, GA. Paullin jumped in his car and came over but by the time he got there, which was perhaps an hour or so, perhaps 2 hours, I was on the bed giving him artificial respiration, and then his heart stopped. His breathing stopped first and as I was pumping his chest, Dr. Paullin came in. We put a shot of adrenalin into his heart—sometimes that starts the heart up again—nothing worked. And that was it.

But there was good evidence based on what you had seen already that it was a cerebral hemorrhage. You could tell by the dilation of the pupils?

Yes, by the usual things. The rigid neck, what they call a subarachnoid hemorrhage, I'm sure. But a good deal of his brain had been damaged. It was a bolt out of the blue.

There's no way to predict anything like that? One would have suspected that his heart would have gone.

We were concerned about that all the time. That was the weak spot, but he had a significant blood pressure. We had brought it down somewhat, but under certain periods of stress, it would just shoot up. But there was no stress at that time. He was having his portrait painted by Mme. [Elizabeth] Shoumatoff. And he was perfectly relaxed going over papers from the White House.

You found evidence in your earlier examinations of arteriosclerosis?

A combination of arterial change

and the blood pressure which was a constant strain on the arteries. For some reason, one popped.

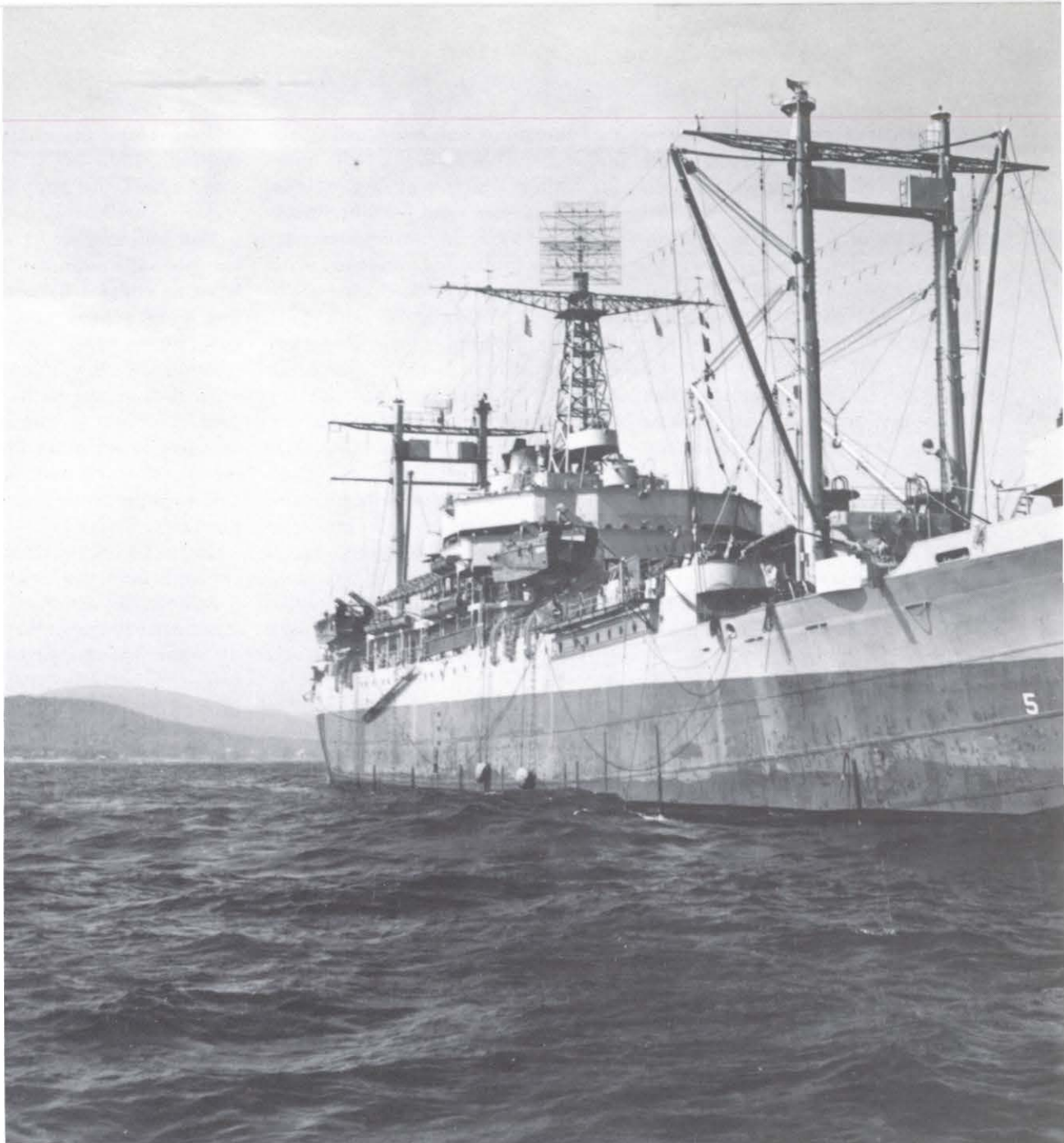
You said in your 1970 article that had you had the modern drugs we now have to control hypertension, you might have been able to perform miracles.

Unquestionably, it would have had a beneficial effect on his blood pressure, which was, presumably, the initiating factor in his final illness. In the last 10 to 15 years we have been able to bring down that [pressure] in practically everybody.

As you know, the President was the personification of a father to so many people in this country. I will never forget after he died in Warm Springs—the train. The last car had lights, not spotlights but lights. And there were four servicemen standing at each corner of his casket—Navy, Army, Air Force, and Marine. Almost unbroken, even at that time of night, lining the rails from Georgia up to Washington, people were standing and crying to say nothing of the stations we went through. It reminded me of the same type of thing that happened when Lincoln died. It was an extraordinary, moving situation. I will never forget it. —JKH

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1. Bruenn HG: Clinical notes on the illness and death of President Franklin D. Roosevelt. *Ann Intern Med* 72:579, 1970.
2. Digitalis, or foxglove, is a powerful cardiac stimulant used to increase heart function and efficiency.
3. FDR made this speech on 12 Aug 1944 at the Bremerton Navy Yard, WA, on his return from his Hawaii consultations with Nimitz and MacArthur.
4. CAPT John Harper, MC, was commanding officer of the National Naval Medical Center during World War II.
5. CAPT Robert Duncan, MC, was NNMC's executive officer.
6. General Watson died of a cerebral hemorrhage aboard USS *Quincy* on the way home.



Cleaning Up Yalta

This past February marked the 45th anniversary of the Yalta Conference among the "Big Three"—President Franklin D. Roosevelt, Prime Minister Winston Churchill, and Marshal Josef Stalin. With no less than seven Allied armies smashing toward the heart of Germany from the west and the Red Army mounting a final push from the east, a violent end of Hitler's Third Reich was a foregone conclusion. It was time for the soon-to-be victors to plan the future of postwar Europe and for Roosevelt to convince the Soviets to enter the war against Japan.

USS *Catoctin* (AGC-5)

gested other Russian sites; McIntire turned them down for similar reasons.

Roosevelt recalled that Yalta in the Crimea was the summer resort of the czars and had Ambassador Averill Harriman investigate the site. When he received a positive report, the President told the Soviet dictator that if the conference were not held at Yalta it would not be held at all, as there were no viable alternatives. Stalin acquiesced and entered enthusiastically upon preparations for the conference.⁽¹⁾

The Crimean site was anything but convenient and, having just been liberated from the Germans, the buildings were in a sorry state. Nazi occupiers had stripped the buildings of plumbing fixtures—toilets, sinks, faucets—and every chandelier. Chief of the White House Secret Service detail, Michael Reilly, having inspected the facilities, reported that filth littered the place and every mattress teemed with bedbugs. A considerable effort would be needed to make it habitable and there was no time for delay.

On 3 Jan 1945, the medical department of the USS *Catoctin* (AGC-5), received orders for the top secret mission. *Catoctin* had previously served as headquarters for the planning of the invasion of southern France. Immediately, one physician and six hospital corpsmen were added to the ship's regular complement. Crewmen took aboard independent housing facilities, including furniture, lighting and heating equipment, as well as a complete medical field unit. They also loaded important drugs, insecticides, and biologicals in ample quantities.

Arriving in Palermo on the 16th, in company with three minesweepers and a Liberty ship, *Catoctin's* skipper learned that the President would likely spend some time aboard. Accordingly, he ordered the crew to renovate living quarters for the official party.

Catoctin and its escorts departed Palermo on 21 Jan and entered the Dardenelles 3 days later, continuing

on to Istanbul and through the Bosphorus. No Allied vessel had transited this passage since before the war and now it was believed infested with German mines. Nevertheless, *Catoctin* rendezvoused with a Soviet destroyer and two minesweepers before mooring at Sevastopol. Only then did the crew learn the full nature of the duty awaiting them. Yalta was inconveniently 50 miles distant, accessible only by a rough and tortuous road.

Livadia, an estate built by Czar Nicholas II in 1912, was just outside Yalta, occupying the side of a mountain and stretching to the shores of the Black Sea. The three principal buildings were 700 feet above sea level and would provide living quarters, offices, restaurants, and a communication center for about 300 people from 1 to 3 weeks.

LCDR L.H. Backus, MC, USNR, and LT T.W. Sullivan, MC, USNR, two officers assigned to the project, reported with some understatement that "Although bathroom facilities are not all that could be expected it is deemed that with regulation, cooperation and a little good naturedness on the part of those concerned they will be adequate."⁽²⁾ (Later, during the conference, members of the official entourage—admirals, generals, and



For months Roosevelt and Churchill had pressed the Soviet leader for a summit, but Stalin begged off, feigning illness and then reminding his allies that the late winter offensive required him to remain in Russia. The longer he could delay, the more of eastern Europe, and particularly, Poland, would remain under Soviet control once there was peace.

Finally he relented, but the meeting would be held on his turf. He offered a site in Odessa, but the President's physician, VADM Ross T. McIntire, MC, vetoed the idea when he learned that disease was prevalent there. Stalin sug-



VADM Ross T. McIntire, MC

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Churchill, Roosevelt, and Stalin pose at Yalta.

presidential advisors—were often seen lined up, towels in hand, waiting to use these limited facilities and, for the most part, good humor prevailed.)

Medical personnel set to work making the palace livable. They built outside latrines to augment existing facilities, and washrooms with shelves and benches to hold washbasins and mirrors. They provided hot water where necessary and even a muster list indicating who would use what toilet facilities. Because the safety of piped water from local mountain streams was at first questionable, lyster bags were provided on all floors. Later, the team chlorinated the piped water at 1 part per million, and once tested aboard *Catoctin*, it was deemed safe.

The flush toilets, although outmoded, were operable; all sewage was piped directly to the sea. The medical team instructed the Russian maids in proper cleaning of washrooms, and provided them cleaning solution and disinfectant.

To deal with the insect population, corpsmen sprayed every bed, every bedspring, mattress, rug, and palace wall hanging with 10 percent DDT in kerosene solution and dusted all linen three times with a 10 percent DDT and talcum powder mixture. Once the guests arrived, they were instructed to report the presence of any insects immediately so spraying could commence in that vicinity.

Cooking facilities, which utilized wood-burning stoves, were adequate for large volume feeding; fresh food was brought in daily. Even though this food was subject to daily inspection it was considered to be beyond U.S. medical control.

The team provided medical care by setting up a combination sick bay with

two beds and dispensary. A chief pharmacist's mate was in constant attendance and physicians were available at all times. During this unit's 15-day-long operation, it averaged 22 sick call cases per day, the majority being coughs, sore throats, upper respiratory infections, headaches, gastritis, constipation, and minor abrasions and lacerations. There were only two serious cases—an acute appendicitis evacuated to *Catoctin* for surgery and a broken leg, also transferred to that support vessel. Dental facilities were available on *Catoctin*, patients being given relief for symptoms at Livadia and then transferred to the ship.

So efficient were all these arrangements, that the British delegation requested and received aid from the Americans.

On Sunday, 11 Feb, the Yalta Conference ended and the presidential party drove the 50 miles to Sevastopol to meet *Catoctin*. The once beautiful city had been totally destroyed by the Germans. The presidential party saw survivors of the desolation living in cellar holes; hardly a building was left standing. Once aboard the ship, "We were all assigned rooms," VADM McIntire later recalled, "and I can assure you that the shower bath I was able to take at this time was one of the greatest treats imaginable, for outside of scrubbing daily with a large, wet bath towel, I had no real bath for eight days."(3) —JKH

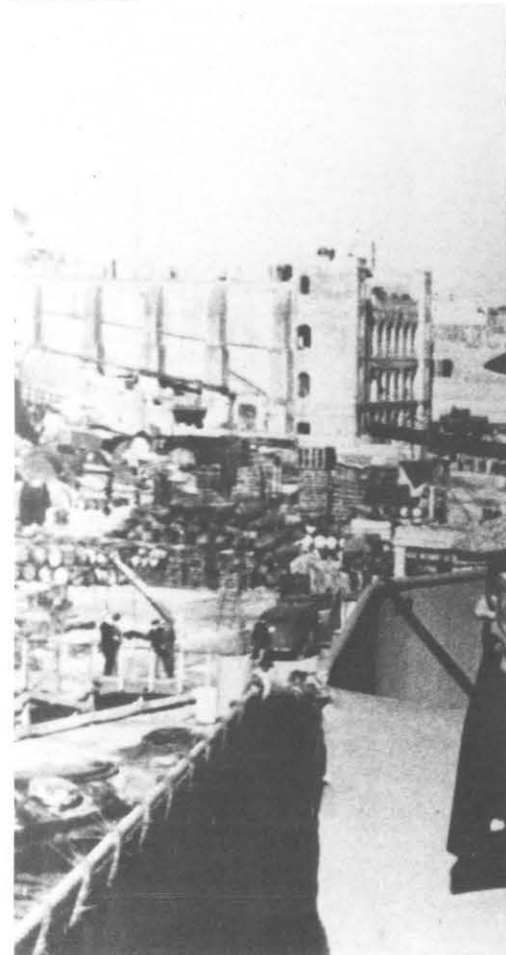
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From Malta to Yalta: Former Associate Justice of the Supreme Court and Director of War Mobilization, James F. Byrnes (left), President Roosevelt, and VADM McIntire look at Valletta docks from the deck of USS *Quincy*. The Maltese capital had been heavily bombed by the Luftwaffe.



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Features

Orlando's Watchful Eye on CHAMPUS Funding

LTJG Keith R. Proctor, MSC, USNR

In recent years tight budgets, limited funds, and skyrocketing costs have led to innovative alternatives for providing quality health care for our retired and dependents of retired/deceased beneficiary community. One of the programs initiated by the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) is the Internal Partnership Agreement Program (IPAP).

This agreement allows our CHAMPUS beneficiaries the convenience of receiving medical care in the Military Treatment Facility, as well as the use of in-house ancillary services, instead of searching for a physician who is willing to accept CHAMPUS out in the community. In addition to the medical care provided by the civilian physicians, all paperwork for filing claims is completed by the Partnership group, relieving the beneficiary from this burden. There is also a substantial cost savings for this care because the physician group offers its services at a discounted cost to the government.

The Family Practice Internal Partnership physicians at Naval Hospital, Orlando treat an average of 1,200 patients a month. To ensure proper acclimation to the military system and military medicine, we have provided our Partnership physicians with command, CHAMPUS, and Outpatient Treatment Record policies and procedures orientations. Complete references and points of contact are also provided so the physicians have a clear understanding of their responsibilities and obligations to the command and especially the beneficiaries whom they see.

Our greatest concern, next to quality patient care, has been to ensure that proper billing procedures were implemented, maintained, and monitored. Therefore, we developed the following quality assurance program to ensure that CHAMPUS claims are filed correctly by our Partnership group. This weekly audit program also allows for corrections to be made in a timely fashion.

1. *Daily*—Compare daily appointment roster with IPAP financial folders to verify eligibility of established patients. This is achieved by:

a. Comparing date of birth (DOB) as shown on patient information form in the financial files to the DOB on daily appointment roster.

b. Verifying the ID card and comparing it with the patient information form in the financial folder.

c. Reviewing patient information form in the financial file with the patient in order to ensure that data is current (e.g.: Has primary insurance coverage changed since the last visit?).

Note: If any discrepancies are noted at this point, an additional Defense Enrollment Eligibility Reporting System (DEERS) check is made. Most cases would involve walk-ins since 100 percent DEERS checks are made on all scheduled appointments prior to the appointment day.

2. *Daily*—Compare amount billed with procedure code to ensure that the contracted amount is being billed. This is achieved by comparing the computer printout that has been transmitted through the automated claims processor with the contracted allowable charges (the guide is the prevailing charge listing).

Note: Information transmitted through the automated claims processor is printed on two-part paper. One copy goes into the financial folder and one copy goes directly to the Supervisor of the Health Benefits Office.

3. *Weekly*—The Supervisor of the Health Benefits Office will randomly audit a minimum of 15 claims a week. This is to ensure that proper billing procedures are maintained according to the contract amount. This audit utilizes a checklist and monitors the following:

a. Ensures that billed charges have been calculated

correctly according to the agreed upon discounted percentage of the current prevailing fee. This is achieved by comparing the superbill with the prevailing charges and comparing the claims submitted to the prevailing charges to ensure that both correspond to the same date of treatment.

b. Ensure that charges correlate with services rendered on the specific date of treatment. This is achieved by comparing the superbill with the patient's Medical Treatment Record for documentation that a given service billed for has been annotated in the patient's Medical Treatment Record.

c. Verifies that primary insurer has been billed first (if applicable) prior to CHAMPUS being billed. This is achieved by reviewing the personal information form located in the patient's financial folder to determine if, in fact, the patient has primary insurance coverage.

d. Compares primary insurer's Explanation of Benefits (EOB) with the superbill to ensure that the date of treatment and the amount billed correspond.

e. Verifies that claims for beneficiaries with primary insurance are billed to the Fiscal Intermediary (FI) at the agreed percentage (only those beneficiaries wherein the primary insurance covered less than the agreed upon CHAMPUS amount).

f. Compares the transmittal printout with the personal information form located in the patient's financial folder to verify that the claim is billed with the correct sponsor's social security number.

4. Upon completion of this weekly audit, a summary report is compiled and any discrepancies or problems are noted. This report is then sent to the Head of the Internal Partnership Program for review and immediate action. Any actions taken must be noted and the form returned in a timely fashion to the Supervisor of the Health Benefits Office. Copies of this report are also sent to the Head of the Outpatient Administration Division and Head of the Patient Administration Department for their review.

Our goal at Naval Hospital, Orlando is two-fold. To offer the highest quality care possible, while minimizing the opportunity for wasting government dollars. On both counts we are proud of our program which has proven to be highly successful.

This program continues to be a success due to the cooperation and support given by IPAP. They understand that our quality assurance program is a group effort and they remain open to all of our concerns at all times. □

LTJG Proctor is stationed at Naval Hospital, Orlando, FL 32813-5200.

A Hypnotherapy Procedure for Smoking Cessation

CDR Raymond N. Sampson, MSC, USN

In the interest of improving the health of active duty, retirees, and dependent personnel, the Navy is encouraging smokers to give up their habit. To help those who wish to quit, all Navy medical facilities conduct smoking cessation classes following the American Lung Smoking Cessation format. Although the American Lung program is certainly excellent, alternative approaches should be considered when needed. Hypnotherapy is one alternative approach by which Navy health care providers can assist smokers to become nonsmokers.

The hypnotherapy procedure that I have used has helped some 3,000 active duty Marines and Navy personnel to become nonsmokers. With the appropriate clinical hypnosis training that can be acquired from the many workshops offered by the American Society of Clinical Hypnosis or The Society for Clinical and Experimental Hypnosis, Navy psychologists, physicians, nurses, and social workers can utilize their learned hypnotherapy skills to assist smokers.

The suggestions that I will describe come from a combination of smoking cessation ideas given by Spiegel (1970), Crasilneck and Hall (1985), and Levitan (1986).

After clearing up the myths surrounding hypnotherapy, it is necessary to determine the patient's reasons for continuing to smoke and for becoming and remaining a nonsmoker. Once that is achieved, the patient is invited to enter a hypnotic trance. A light trance is sufficient.

I explain that I will talk the patient through two self-hypnosis procedures, any one of which can later, with

practice, be used to enter self-hypnosis to reinforce suggestions found helpful. I then tell the patient that while I am talking him/her through the self-hypnosis procedures, he/she is to imagine doing the procedure in a familiar environment, because that is where the patient will eventually be doing future self-hypnosis exercises.

Next, the patient is asked to get into a comfortable position and is then talked through two self-hypnosis procedures that can be safely used anywhere. After the patient is in a comfortable trance, I say the following:

"In this relaxed position, you can remind yourself of three important points:

- For my body, smoking is a poison.
- I need my body to live.
- I owe my body this respect and protection.

"Smoking is not so much a poison for you as it is for your body specifically. Your body doesn't decide what to put into it. You decide. All your body can do is accept what you give it, much the way a little child depends on you to take care of him or her. But when you realize that you are the one putting the poison there, then you must ask yourself which side you are on? Are you for your body or not? Are you for living or not? If you are not for living, then keep on smoking. But if the idea of living is still important to you then you owe your body respect and protection.

"Now you have two urges at the same time. One is the urge to smoke and the other is the urge to respect your body. Lock them together. If you emphasize one, you have

to ignore the other. If you emphasize this urge to respect your body, then you have to ignore the urge to smoke. If anyone says anything negative to you that disrupts your efforts to quit smoking, then it will be as though they were speaking to you in a foreign language; you simply will not understand them. If anyone says anything negative to you in a way that disrupts your efforts to become and remain a nonsmoker, then it will be as though they were speaking to you in a foreign language; you will not understand them.

"You then recognize that to give up on your plan would be to give up on yourself, and you are not about to give up on your plan or yourself. You know what happens to muscles if you don't use them. They atrophy. Habits not used anymore also atrophy. In fact, there is a law of human behavior that goes like this: Any urge, biological or psychological, will wither away if ignored. That's true even for a biological urge such as hunger.

"When Mahatma Gandhi went on his 40-day fast, he reported that by the fifth day he simply wasn't hungry anymore. He had simply lost all desire for food. Thousands of soldiers all over the world have reported the same phenomenon in combat. When they are cut off from their supplies and haven't eaten for several days, the last thing they are interested in is food. They are more concerned about more important matters, such as staying alive! They often have to be reminded to eat. Now there is a lesson in all of this. If a biological urge will wither away by being ignored, certainly a learned outgrown, outworn habit, such as smoking, will also wither away each time you choose to respect your body. *For my body, smoking is a poison. I need my body to live. I owe my body this respect and protection.*

"Whenever you are tempted to have a cigarette, you can immediately think of all the disgusting things the cigarette means to you and the disgust can diminish your desire to smoke one. Whenever you refuse to yield to that temptation, you can be rewarded with a feeling of pleasure and pride that you had the intelligence and strength to stop this disgusting habit. The longer you go without smoking, the more rewards you will accumulate. You will feel healthier. You will have more vitality and stamina. You may find that you think more clearly and have a greater sexual drive.

"Whenever you see other people smoking, this will no longer present a temptation but can instead give you a feeling of satisfaction—pride that you had the intelligence and strength to stop a disgusting habit, a habit they have not been able to stop. In the process, you are adding about 7 years to your life. What a wonderful gift to give yourself and all those who care about you! Think of those who have ever mattered to you and what they would say to you now to encourage you. Remember a time when you were faced with a challenge and won! You overcame that test and had feelings of success that came from that. You can utilize all

your strengths and resources in facing this challenge as well, and then experience all the feelings of success that come from that triumph.

"Visualize a large red balloon with a basket suspended beneath it. Walk up to the basket and throw in all your cigarettes and lighters—all your reasons for smoking. Then watch the balloon and basket lift up into the air and become smaller and smaller until it's gone, leaving you feeling relieved, contented, and confident.

"Visualize eating and not needing to smoke, and look across the table at the faces of those who are proud of you. Its nice to know you can win. And you can win, comfortably.

"Visualize giving a talk to all those you know most who need to quit smoking. You walk to the front of the classroom and on the left side of the chalkboard you write all the reasons to continue to smoke (here I read the reasons the patient has given me to continue to smoke). You realize that none of those are good reasons, so you erase them! Then on the right side of the chalkboard you write all the reasons to become and remain a nonsmoker (here I read all the reasons the patient has given me to become and remain a nonsmoker). You then realize that all those are good reasons; those you leave on the chalkboard.

"Practice one or both of the self-hypnosis exercises at least 10 times a day for at least 3 weeks. Walk at least a mile a day, or an equivalent exercise, if your physician approves. That will relieve any anxiety associated with habit change. Drink plenty of water and fruit juices. You can chew sugar-free gum or sugar-free candy. Some people find that helpful. You can stop smoking as of now. You can, stop smoking, as of now. And you can stop smoking! As of now!"

The patient is then reoriented from trance. After answering any questions he/she has, you encourage them to contact you at least three times a week, for at least 3 weeks, to give a progress report. That ends the session.

After receiving the appropriate hypnotherapy training, all providers are encouraged to try this clinical hypnosis procedure to assist smokers.

If you have questions, please call me on Autovon 295-0791, or write me at the Psychology Department, National Naval Medical Center, Bethesda, MD 20814-5011.

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Dr. Sampson is Clinical Director, Psychology Department, NNMC, Bethesda, MD 20814-5011.

Borderline Personality Disorder Afloat

LT Howard C. Wetsman, MC, USNR

A naval vessel at sea is unique among military units in mission, structure, and organization. No other command is as large yet as isolated. No other unit operates in as hazardous a peacetime environment or must be as self-sufficient.

The danger inherent in the actions of a knowledgeable crewman with severe character pathology is manifest. One can imagine a disgruntled FN (fireman) dropping salt tablets into the feed water sounding tube to ruin the ship's boiler or a disgruntled MS (mess specialist) doctoring the wardroom's food. For sailors in nearly every rating there is access, opportunity, and knowledge to harm the ship or mission. The survival of the ship and crew depend in a very real way on the performance and reliability of each sailor aboard.

Sailors with a personality disorder are difficult to treat largely because their presenting complaint is generally about somebody else. Their expectation of help often differs from what the physician feels is necessary, making the building of rapport and therapeutic alliance difficult at best and often impossible. Compounding this is the lack of confidentiality in the military and the lack of any useful therapeutic process to "cure" personality disorders. These patients are often help rejecters who resist insight and thwart the best resolution to the crisis. Because of the difficulty in treating these patients in the military, their cases often end in administrative discharge for unsuitability.

The care disposition of a sailor with a personality disorder afloat is doubly complicated because he is often seen as a malingerer or a malcontent, evoking a strong sadistic response from his command. Many commands hesitate to follow recommendations for administrative separation (1) out of concern that the individual's behavior will be mimicked to achieve the same goal. There is also a strong desire not to let the patient "have his way."

No personality disorder is more likely to result in conflict and acting out than borderline personality disorder.(2) No other personality disorder evokes as much emotion from the crew and command. While harmful

acting out is rare, conflict between the borderline sailor and the command is not. These patients are usually "hateful"(3) and their care becomes quite complicated by their presence aboard ship. Availability of different levels of command and different departments with overlapping responsibilities allow for splitting. Most importantly, the ship or mission could be crippled by a borderline sailor with the right knowledge in a self-destructive rage.

The typical "battle" between the command and a borderline patient will leave most commands feeling impotent and exhausted. Even if the command "wins" it usually expends a great deal of manpower and resources. The case presented represents an example of resolution of the conflict with a minimum of expense to the command.

Report of a Case

Some small facts and identifying data have been changed so as not to reveal the identity of any single person. The patient is a 20-year-old male Electronics Technician Third Class with 2 years of continuous active duty, who first presented 5 days before a major underway period with the chief complaint of, "The chaplain is an asshole." The patient's mother, who was not his dependent, had recently been admitted for inpatient psychiatric treatment in another state. She had been depressed since her ex-husband, a retired Navy chief, had died 3 years before. She had been admitted twice before for depression. For the last 5 years she had not spoken to the patient and had alienated her sister and mother. The patient's parents had been divorced since he was 3 years old. He described his mother as inconsistent and physically abusive. The patient graduated from high school where he described several short but intense friendships which ended in devaluation. There was no significant past psychiatric or medical history.

He applied for a humanitarian transfer and was turned down as his specialty within his rating had no shore billets. The command offered to change his application to one of humanitarian discharge, but the patient refused saying, "I want to stay in the Navy." By the time he presented to the medical officer he had alienated the ship's chaplain, his

division officer, his department head, and the ship's XO, all of whom felt they had done their best for the patient.

In his conversation with the ship's medical officer he reversed his position on humanitarian discharge saying he was willing to give up his career and his \$5,000 life's savings to help his estranged mother because, "The Navy obviously isn't going to do anything about it." He could not explain the origin of his expectations but clearly felt that the problem should be solved for him. He denied any relation between his wish to leave and the upcoming deployment.

On initial mental status exam (4) he was seen as a histrionic young male sitting quietly, wiping his glasses constantly. He had good eye contact. His speech was low in volume and indicative of goal-directed thought processes. There was no evidence of hallucinations or delusions. He stated that he was not homicidal or suicidal. There were no neurovegetative signs of depression. He described his mood as "sad," and his affect was full range. His cognition was intact, but his insight into the situation was almost nonexistent. Clearly, his judgment was impaired as evidenced by his alienating everyone who could help.

The medical officer's impression at that time was "probable personality disorder (narcissistic or histrionic) vs. adjustment disorder with depressed mood." A routine psychiatric appointment was made for the patient. Liaison was accomplished with his department head and the ship's chaplain to get the patient's humanitarian discharge packet started. The patient took 3 days of leave to see his mother.

On the day the patient was to return from leave, his mother's civilian psychologist called the ship's medical department to ask if she could begin outpatient therapy with the patient and if his leave could be extended. She related that he had told her that the ship's medical officer could grant these requests. She was informed that only his department head could extend his leave and that the ship's medical officer could not commit Navy funds to pay for her treatment of the sailor. She called the patient's department head who made the decision not to extend the leave. The department head called the patient and informed him of such.

At 0200 that night, immediately upon return to the ship, the patient awoke the duty corpsman to inform him that he was having suicidal and homicidal ideas. He was examined then by the ship's medical officer.

At that time the patient related that he had a great deal of rage against the command and his department head. He further stated that he had thought of "1,001 ways to kill myself" and that "I'll take half the crew with me." He was transferred that night to Portsmouth Naval Hospital where psychiatric evaluation resulted in the diagnosis of personality disorder and the following statement in his record:

"The patient's personality disorder is not responsive to conventional psychiatric treatment in the military. His personality disorder is of such severity as to render the

TABLE 1
DSMIII-R Criteria for Borderline
Personality Disorder (2)

A pervasive pattern of instability of mood, interpersonal relationships, and self-image, beginning by early adulthood and present in a variety of contexts, as indicated by at least five of the following:

1. A pattern of unstable and intense interpersonal relationships characterized by alternating between extremes of overidealization and devaluation.
2. Impulsiveness in at least two areas that are potentially self-damaging, e.g., spending, sex, substance use, shoplifting, reckless driving, binge eating (do not include suicidal or self-mutilating behavior covered in 5).
3. Affective instability: marked shifts from baseline mood to depression, irritability, or anxiety, usually lasting a few hours and only rarely more than a few days.
4. Inappropriate, intense anger or lack of control or anger, e.g., frequent displays of temper, constant anger, recurrent physical fights.
5. Recurrent suicidal threats, gestures, or behavior, or self-mutilating behavior.
6. Marked and persistent identity disturbance manifested by uncertainty about at least two of the following: self-image, sexual orientation, long-term goals or career choice, type of friends desired, preferred values.
7. Chronic feeling of emptiness or boredom.
8. Frantic efforts to avoid real or imagined abandonment (do not include suicidal or self-mutilating behavior covered in 5).

patient unsuitable for continued military service, particularly shipboard duties. Given the patient's lifelong maladaptive behaviors he may consider or attempt self-harm or harm to others in the future, particularly in a manipulative fashion to achieve a desired response from the command. This includes a possible accidental suicide."

Shortly after returning to the ship later that morning he again presented to the medical department requesting to see the medical officer. A corpsman told him the medical officer was seeing another patient and unless it was an emergency he could not be disturbed. The patient then pulled a razor blade from his pocket and began to make a series of cuts to his forearm and thenar eminence saying, "I guess this makes it an emergency." He was disarmed, restrained, and after evaluation transferred to Portsmouth Naval Hospital where he was admitted.

On that admission the additional history was obtained of six prior episodes of "rage" and self-mutilation. After a 2-day hospitalization he was returned with a diagnosis of borderline personality disorder and a recommendation for expeditious administrative separation.

The ship was leaving for deployment in 2 days. It was the medical officer's opinion that the patient should be ad-

TABLE 2
Glossary of Technical Terms

Acting out: A mechanism in which the person acts on an unconscious conflict without reflection or apparent regard for negative consequences.

Devaluation: A mechanism in which the person attributes exaggeratedly negative qualities to self or others.

Splitting: A mechanism in which the person views himself or others as all good or all bad, failing to integrate the positive and the negative qualities of self and others into cohesive images; often the person alternately idealizes and devalues the same person.

ministratively separated expeditiously, using his potential dangerousness as a reason. All parties concurred. The ship's XO expressed concern about the patient getting what he wanted—"out of the deployment"—but the command was able to see that the potential difficulties in keeping him aboard outweighed any loss of discipline. Further, the crew would see that the patient could not get out of the cruise and stay in the Navy. He was left behind at a Transient Personnel Unit and discharged administratively.

Discussion

The ship's mission in this case was to support a major NATO exercise and performance of its electronics suite was crucial. The patient had knowledge of and access to critical equipment. The command was able to see that he could not be trusted as a reliable member of the electronics repair and support team. Further, the ship could not afford the surveillance necessary to absolutely safeguard the equipment with him aboard. The captain realized that the presence of an enraged borderline with expert knowledge was a great risk and not worth "the pound of flesh" that could be gotten by making the patient deploy.

This final position was the result of much education of the command components by the ship's medical department and close liaison with Portsmouth Naval Hospital. The wording given in the psychiatric evaluation allowed for the rapid disposition.

Contrary to what was expected, the crewmen who were aware of what happened were glad to see the patient go. His departure did not cause an increase in acting out as a way to seek discharge. After the incident the line officers were able to look back and see that the patient's actions did not follow an easily understood pattern of logic. They realized there was a fundamental difference in the way the patient thought and related to others.

Conclusion

The presence of sailors with chaotic personality disorders is a potential danger to self, others, and mission.

When they come in conflict with the command or others the possibility of dangerous acting out exists.

As long as discharge for personality disorders is outside the scope of the Navy Medical Department the treatment and disposition of personality disordered patients will continue to be complicated. Great liaison efforts on the part of the ship's medical officer with the line and psychiatric consultants are critical. The medical officer must foster consistency within the command and avoid becoming enmeshed in splitting behavior. The role of the medical officer as educator of the line and translator for the psychiatric consultant cannot be overstated. He must educate the line about personality disorders. Line officers sometimes hear "almost a personality disorder" when they are told about a borderline personality disorder. Further, they should understand that there is a fundamental difference in reactivity in patients with personality disorders, and these are not people who can just "pull themselves together." A line officer or an inexperienced medical officer may have difficulty comprehending the unstable emotions and primitive thoughts (5) of a patient with a severe personality disorder.

Translation of the psychiatric consultant's words for the line is also necessary. Line officers will understand the consultant's diagnosis and appeal for administrative discharge to mean, "This guy is real sick and somebody better do something but I don't want to. Oh, by the way, he's fit for full duty." In reality the consultant means that he can only make the diagnosis and is not empowered by the Navy to act on it. Only the command can institute separation procedures.

The issue of sailors with severe personality disorders in the Navy in general, and at sea in particular, will not go away. It behooves all medical officers afloat to understand these conditions and stand ready to act as liaison person, educator, and translator for the command. At nearly all cost the temptation to engage in a "battle" with a personality disordered sailor should be avoided. A struggle with these enraged, chaotic individuals cannot be won in the conventional sense and is quite possibly dangerous to the patient or the ship.

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When this article was written Dr. Wetsman was a psychiatry resident at Louisiana State University School of Medicine.

Urological Injuries in War and Peace

Contrasting Dilemmas in Quality of Care

Part I: Management of Genitourinary Trauma in the Civilian Setting

CAPT Arthur M. Smith, MC, USNR

From the Walter Reed General Hospital in 1946, 13 patients with complex fistulas between the prostatic or membranous urethra and the rectum were described in the medical literature.⁽¹⁾ All developed as a result of combat wounds from rifle and shell fire. Many suffered from rectal or urethral stenosis as well, in addition to pubic bone osteomyelitis. How were such complicated problems acquired?

On one occasion, for example, two machine pistol bullets entered the abdomen of a soldier just above the pubic symphysis. They passed through the bladder, pubic bone, prostatic urethra, apex of prostate, and rectum. One bullet exited through the right ischiorectal fossa and injured the rectum, while the other, diverted by the bone, passed out through the left hip. Urine subsequently drained from the rectum, from an additional wound adjacent to his coccyx, and from a wound in one buttock.

Another patient in the series, with a similar type injury, drained stool through the exit wounds and through his urethral catheter. Suprapubic cystostomy drainage and colostomy, the most that could be accomplished at that time in a forward combat surgical facility, were insufficient primary treatment to prevent these devastating complications. Complexities such as these, encountered infrequently in the peacetime practice of trauma surgery, are representative of the unique professional challenges encountered by wartime surgeons.

Those who care for patients in a conflict environment must recognize that the professional ground rules under which they operate are substantially different from those utilized in the peacetime practice of medicine. In order to maximize their functional effectiveness in these divergent settings, military physicians must first understand the

contrasting differences among the types of injuries and illnesses incurred. Furthermore, they must become acquainted with those principles of medical and surgical practice which have proven to be uniquely effective in each of these highly varied and differing circumstances.

Utilizing the aforementioned postulate as its conceptual justification, an initial effort was recently undertaken under Department of Defense sponsorship to produce military specific curricula for graduate medical education programs in the armed services. In 1989, various specialty committees of experts, drawn together by the Uniformed Services University of the Health Sciences, promulgated their initial instructional objectives.(2)

Within the context of the *Military Unique Curriculum* are subject recommendations for nine defined specialties. Fortuitously, contained within the curricula independently developed by the committees for family practice, general surgery, obstetrics and gynecology, and orthopedic surgery are proposals for instruction in the management of genitourinary trauma. These instructional goals obviously recognize the ubiquitous nature of urological injuries, which frequently coexist during times of war with injuries of other organ systems.(3-5)

This essay attempts to contrast the philosophic bases for management of genitourinary trauma in the civilian sphere with those utilized during military conflict. Hopefully, it will also serve as an example of the broader spectrum of compromises and prioritizations that are generally required in managing the multiply injured patient during times of war. (Obviously, the implications for defining *quality of care* expectations in wartime are closely related.)

Diagnostic Evaluation

When dealing with the possibility of trauma to the genitourinary structures, a useful and fundamental diagnostic precept is, "Work From the Bottom Up." This implies the implementation of a systematic retrograde evaluation of urinary tract anatomy. Initially, before carrying out any instrumentation which might inadvertently aggravate an occult minor urethral injury, a retrograde urethrogram is performed.

After documenting the anatomic integrity of the urethra, catheterization is performed. A contrast cystogram and a postdrainage film are then obtained to define the anatomic integrity of the bladder wall in both full and empty states. A high dose excretory urogram (IVP) with tomographic cuts of the kidneys then follows. (When the clinical status of the upper urinary tracts is still uncertain, computerized tomography with intravenous contrast injection may be used, if available, for more detailed diagnostic accuracy.)

Although individual clinical circumstances may require modifications or additions of other imaging modalities such as angiography or retrograde ureteropyelograms to

the diagnostic sequence, this time-tested conceptual approach has proven to be safe and thorough, while reducing the possibility of clinical error in diagnosis.

Injuries of the Kidney

Renal injuries may occur as a consequence of either blunt trauma or penetrating wounds. Diagnostic and therapeutic priorities often differ in these two groups and are generally dependent upon the nature of the wounding mechanism.

Blunt Renal Injury. Invariably, the occurrence of blunt injury is more common in the civilian setting than during military conflict and is frequently related to vehicular accidents or falls. Blunt renal trauma encompasses a spectrum of injuries, ranging from minor contusion to maceration of the kidneys. Strangely, 20 percent of patients with significant upper urinary tract injury following blunt trauma do not even have hematuria.

Accordingly, even in the absence of hematuria, full urological evaluation should also receive high priority consideration in: patients with blunt abdominal/flank trauma, patients with fractures of the lower ribs or transverse processes of the lumbar vertebrae, the injured patient with unexplained ileus or abdominal pain, or when either a flank mass or costovertebral angle tenderness is noted following blunt injury.

If additional information is critical to the care of the patient, computerized tomography or selective angiography may be utilized to improve definition of the degree of renal trauma. (For example, the failure of a kidney to excrete any contrast material after blunt injury suggests an intimal tear with thrombosis of the renal artery. If required, angiography may confirm this type of vascular insult.) Even if arteriography is not available, however, sound clinical judgment can still be used to manage most blunt injuries with reasonably good results.

Renal contusions and minor lacerations comprise 85 percent of blunt renal injuries. These injuries can usually be treated without surgery since the fascial coverings of the kidney commonly tamponade the perirenal hematoma. In modestly equipped hospitals, an expectant approach can be utilized for handling most of these injuries, if they are not associated with other life-threatening conditions such as ruptured abdominal viscera. This entails a regimen of bed rest, blood cross match, vital signs monitoring, and frequent clinical evaluation.

Those patients who may require operative intervention generally demonstrate signs of continued retroperitoneal bleeding, manifested by a dropping hematocrit, vascular instability, or an expanding flank mass. Occasionally, an expanding flank mass may result not from a hematoma but from a major tear in the urinary collecting system, with the development of a retroperitoneal urine collection (urinoma). In this case, additional studies such as computerized tomography and cystoscopy with retrograde

pyelography may be required for a more definitive diagnosis prior to surgical exploration.

During surgery for blunt renal trauma, a fundamental precept is to obtain control of the vascular supply of the kidney prior to releasing the perirenal hematoma tamponade. Subsequently, an assessment of damage can be undertaken more safely. If the kidney is deemed salvageable, debridement of devitalized tissue is undertaken, partial nephrectomy performed if required, and continuity of the collecting system reestablished. Appropriate splints, drains, or nephrostomy tubes are then emplaced.

The rare case of a unilateral traumatic thrombosis of a renal artery first requires careful consideration of the risks involved in any operative attempts at repair. This should be complemented by knowledge of the dismally low surgical salvage rate of such kidneys, even under the most optimal clinical conditions.

One must also recognize that all patients who have experienced appreciable renal trauma require at least a 1-year followup of blood pressure because of possible perirenal scarring with vascular compromise.

Penetrating Renal Injury. Most experienced surgeons recognize that following penetrating injury of the back, chest, or abdomen, the absence of a flank mass, flank rigidity, or hematuria does not completely exclude the possibility of renal injury. When suspected preoperatively, and if both time and the patient's physiologic stability permit, some trauma centers have utilized renal angiography in evaluating these injuries. An additional alternative, and one which is proving quite effective, is imaging with computerized tomography. At the least, if a decision for surgical exploration has been made and time permits, a high dose infusion IVP should be considered. This is to document the functional integrity of the contralateral kidney, should removal of the traumatized kidney be under consideration.

Experience has shown that 80 percent of patients with penetrating renal injuries have other associated intra-abdominal injuries. As in wartime, the more urgent life-threatening collateral conditions often demand priority of attention. Full urologic evaluation, therefore, is not often completed prior to surgical exploration. Many management decisions concerning penetrating renal injury must consequently await an intraoperative assessment of urinary tract damage. For example, most patients with penetrating renal vascular injuries arrive in shock. Such injuries are frequently associated with other vascular injuries as well. The time constraints imposed by the stability of the patient's general condition will obviously limit the extent, if any, of the preoperative workup.

The stability of the patient and the extent of other associated injuries will also heavily impact upon the intraoperative time that surgeons can allow for salvage of a traumatized kidney. Granted, obtaining control of renal blood supply prior to decompressing the perirenal hema-

toma is a fundamental surgical maxim. Nevertheless, time constraints imposed by managing the complexities of other associated injuries, such as those involving the pancreas, small bowel, colon, and vascular structures, may prompt complete removal of a kidney that might have been partially salvaged under less emergent conditions. Where these constraints are minimal, the principles of debridement, partial nephrectomy, watertight collecting system closure, splinting, draining, and institution of tube decompression of the kidney remain axiomatic.

Management of Ureteral Trauma

General principles for managing injuries of the *upper three fourths* of the ureter include:

- Aggressive debridement, especially if following high velocity missile injury.
- Adequate mobilization of ureteral ends for reapproximation without tension.
- Spatulation of ureteral ends and watertight closure with absorbable suture.
- Surrounding the anastomosis with live fat or omentum.
- Isolating the anastomosis from pancreatic secretions.
- Use of ureteral stents, exiting either into the bladder or externally, if there is: undue tension on the anastomosis, ureteral ischemia, adjacent pancreatic injury, or overt adjacent infection.
- External tissue drainage of the region adjacent to the anastomosis, whether it has been intubated or not.
- Nephrostomy tube drainage, with a 3- to 6-month delay before definitive repair, is utilized if an abscess or other major infections are associated with the injury.

In managing trauma to the *lower quarter* of the ureter, a clean injury which is recognized early may be repaired by reimplantation of the ureter into the bladder (ureteroneocystostomy), or connecting the ureter to its contralateral mate (transureteroureterostomy). Compensation for an insufficient length of the lower quarter may be occasionally achieved by full mobilization of the kidney and distal fixation of its capsule to retroperitoneal tissues, in addition to the formation of a tubed bladder flap to extend superiorly and bridge the gap. Alternatively, the gap may be bridged by mobilization of the entire dome and sides of the bladder, and bringing it cranially to meet the lower end of the shortened ureter. The mobilized upper extent of the bladder is secured to the psoas muscle (the "Psoas Hitch") at the upper extent of its mobilization.

Massive lower quarter injuries may occasionally require either temporary nephrostomy tube drainage, bowel interposition between proximal ureter and bladder, autotransplantation of the kidney and remaining ureter to a position closer to the bladder, or nephrectomy as a last resort.

Management principles will differ if recognition of the existence of a lower quarter ureteral injury has been

delayed and the integrity of the pelvic tissues is compromised. High proximal urinary tract decompression with a preliminary tubed nephrostomy and delayed definitive repair may be required. Alternatively, high transureteroureterostomy may be utilized, or even a nephrectomy may be chosen if the patient's condition is unstable.

Bladder Trauma

Bladder injuries with urinary extravasation may involve either intraperitoneal or extraperitoneal perforations. The nature of the traumatic event and the degree of bladder filling at the time of injury (perhaps it was full and therefore mostly intraperitoneal at the time of injury, or empty and therefore confined to the recesses of the bony pelvis), may have an effect upon the location and type of bladder injury.

Most intraperitoneal ruptures from blunt injuries are adequately treated by open repair of the bladder laceration, and bladder decompression by a cystostomy tube or urethral catheter for several weeks. (Occasional small iatrogenic perforations, under closely monitored circumstances, have been successfully managed with urethral catheter drainage alone.) Penetrating bladder injuries, often sustained while the bladder is full and predominantly intraperitoneal, are generally treated at the time of laparotomy for multiple abdominal injuries and are similarly debrided, sutured closed, and drained by a cystostomy tube.

Extraperitoneal rupture, often following blunt injury and commonly associated with pelvic girdle fractures (which produce sharp perforating bone fragments), requires bladder decompression primarily, generally by a urethral catheter. On occasion, drainage of the perivesical tissues may also be implemented, but this may provoke dangerous sequelae by decompression of a tightly constrained pelvic hematoma.

Urethral Trauma

Urethral injuries may occur as a result of blunt or penetrating etiologies. They are predominantly located either distal to the urogenital diaphragm (bulbous and anterior urethra), or at the prostatomembranous urethral junction. The location and degree of urethral injury, except for obvious perforations of the distal penile portion of the anterior urethra, are best defined by use of the retrograde urethrogram.

It is best to avoid instrumentation following incomplete tears of the anterior and bulbous urethra. They are best managed by instituting suprapubic bladder drainage for several weeks. In the penile portion of the anterior urethra, obvious sharp lacerations may be closed primarily over a urethral catheter stent following minimal debridement if wounds and tissues are clean. Proximal cystostomy drainage is required as well. In penile urethra, when tissue integrity is in question, the cut urethral edges may be

sutured to the skin (marsupialized), and reconstruction deferred to a later date. Cystostomy (or occasionally catheter drainage for penile lesions) is then necessary until tissue integrity stabilizes.

Complete disruption of the anterior urethra with much tissue destruction or tissue hemorrhage may be primarily managed by cystostomy tube drainage alone. If a clean lacerating transection has occurred, a direct repair of the injury with absorbable sutures may be attempted. Concomitant cystostomy drainage may be helpful as well.

Prostatomembranous urethral disruption at the urogenital diaphragm commonly accompanies pelvic fracture. Although it is often stated that a "high riding" prostate gland may be detected on rectal examination, the presence of a sizable pelvic hematoma often renders the rectal exam ambiguous. Initial therapy generally consists of suprapubic tube cystostomy drainage, with delayed elective repair of the injured urethra at a later date. On occasion, a primary surgical realignment of the urethra may be undertaken, but at the risk of significant hemorrhage by decompressing the pelvic hematoma, which can be quite hazardous to the hemodynamic stability of the patient.

Genital Trauma

Most external genital injuries in the civilian setting occur as a result of industrial, farm, or automobile accidents, as well as athletic contests, malicious assault, or following attempts at self-mutilation. Such penoscrotal injuries are classified in much the same manner as injuries to other portions of the body: nonpenetrating wounds or contusions, penetrating wounds (incisions, lacerations, and punctures), and loss of skin covering from avulsions or burns.

Nonpenetrating Injury. During the acute phase, treatment is aimed at relief of pain, prevention of exudation and edema, and control of hemorrhage. Immobilization, to promote healing of the injured tissues, is also instituted. The aim of surgical exploration is to secure open blood vessels, repair damaged structures such as testes and penis, provide adequate drainage of the tissues and scrotal hematomas, and divert the urinary stream, when needed. For example, with evidence of unremitting hemorrhage into tissues of the scrotum, penis, or perineum, exploratory operative intervention may be required. Likewise, demonstration of urinary extravasation via a retrograde urethrogram demands surgical attention. Furthermore, evidence suggestive of disruption of underlying structures, such as testicular rupture or penile shaft fracture, also warrant operation.

Penetrating Injuries. Regardless of the etiology, these share the common problem of introduction of foreign material and bacteria into the wound. Based upon this common property of potential infection, the principles of management are: wound irrigation, debridement and removal of foreign bodies, hemostasis, inspection and repair

of damaged underlying structures (although repair may require delay until quiescence of tissue inflammation and infection), systemic antibiotics, and postrepair wound care if the contaminated wounds are not closed primarily and subject instead to delayed closure. Urinary diversion via cystostomy tube or urethral catheter may also be required.

Partial or Complete Losses or Skin Coverings. These require specialized management, depending upon whether one is dealing with avulsions or burns. If viable scrotal remnants remain following debridement, primary closure with tissue drainage may be attempted. When time constraints supervene following scrotal avulsions, temporary coverage of testes beneath full thickness medial thigh flap pouches may be utilized. If not feasible, temporary suturing of the two testes together may help in preventing torsion of the denuded gonads. At a subsequent date, following adequate preparation of the wound bed, slightly thick split thickness skin grafts can provide excellent coverage and functional pliability for areas of penile and scrotal skin loss. Burn care of the genitals obviously requires an exceedingly conservative therapeutic plan, with attention to functional as well as cosmetic rehabilitation.

Amputations of the Genitalia. Whether of traumatic etiology, self or maliciously inflicted, or of iatrogenic origin, these are highly specialized injuries that require multidisciplinary approaches to management. Although cosmetic successes may occasionally be achieved, functional restoration does not always result concomitantly.

Part II will appear in the next issue.

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CAPT Smith is Clinical Professor of Surgery at the Uniformed Services University of the Health Sciences, Bethesda, MD 20814-5011. He is also Professor of Surgery (Urology) at the Medical College of Georgia, Augusta, GA 30912-4050.

Emergency Medicine Residencies

Michigan State University is actively seeking qualified candidates for military-sponsored positions in their Emergency Medicine Residency Program. The university is developing an ongoing active duty, off-site training residency program (all services) for appropriate applicants. The program is dual accredited (DO/MD), and is seeking *active duty physicians* for these positions.

Interested candidates should contact: CDR Ron Rhule, MC, USNR, Assistant Director, Military Affairs, Michigan State University, Emergency Medicine Residency Program, P.O. Box 30480, Lansing, MI 48909. Telephone: (517) 483-2583.

Highlights From the Navy Medical Research and Development Command

Bethesda, MD

• New Procedure Helps Identify Medical Requirements of the Fleet

One of the most important and difficult challenges facing Navy medical researchers today is maintaining an active dialogue with operational medical and line personnel who can provide a unique perspective on the real biomedical problems currently experienced by the fleet. Until a few years ago, there was no defined process for communicating fleet medical needs through R&D channels, allowing medical research activities only a most tenuous link to this critical source of needs information. Now, however, we have a medical requirements system in place. Briefly, any Navy personnel can prepare a "Tentative Medical Requirement" (TMR) docu-

ment to address the biomedical issue and potentially to suggest a research approach (Ref: OPNAVINST 3910.21 of 4 April 1985). The TMR is reviewed by a panel of medical officers who weigh the expressed need against other medical requirements and available resources, and suggest action to the Navy Surgeon General. If promulgated by the Surgeon General, the TMR becomes a "Medical Requirement," and R&D resources are programmed for support of the required research. Although it usually takes a few years before these resources become available, the TMR system ensures that the right fleet medical problems are ultimately addressed.

* * *

• Is It HTLV-1 Infection or Malaria?

Investigators at the Naval Medical Research Unit No. 2, Manila, RP, have made a unique observation: sera from patients with antibodies against malaria may yield false-positive tests for infection with the HTLV-1 virus. These sera yield Western blot banding patterns similar to those seen with HTLV-1 infection, and adsorption of the sera with malaria-infected red blood

cells removes the bands. The investigators have theorized that malaria parasites and the HTLV-1 virus must share some common epitopes on their surface antigens, and emphasize that caution must be used in interpreting test results for HTLV-1, especially in tropical areas where malaria infections are prevalent. Studies are now underway to further define the cross-reactivity between these two very different organisms.

* * *

• DNBI Rates: A Novel Information Source for Medical Planners

Investigators at the Naval Health Research Center, San Diego, CA, have completed a study on the Disease and Non-Battle Injury (DNBI) rates for U.S. Navy enlisted personnel. Hospital admissions records and outpatient visits of personnel from 290 Navy ships and 983 shore stations, for the years 1980 through 1984, were examined. In addition, records of outpatients requiring bed rest were collected from 12 Navy ships and 3 shore facilities. DNBI rates were computed from these data for forces in Northeast Asia, Southwest Asia, Europe, and the continental United States. Hospital

admission rates ranged between 0.125 and 0.412 admissions per 1,000 persons per day. Mental disorders accounted for the greatest number of hospitalizations for both shipboard and shore-based personnel. Diseases of the digestive system, accidents, poisonings, and violence also contributed greatly to the number of hospitalizations on ship. The categories that contributed most to the outpatient DNBI rates were respiratory illness, diseases of the digestive system, and infectious and parasitic diseases. Although these results reflect DNBI rates under peacetime conditions, these data will be useful in developing projections for wartime operations.

For additional information on these or other medical R&D projects, contact NMRDC Code 40 at Commercial (202) 295-1468 or Autovon 295-1468.

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